

QSFP+ IR4 PSM InterBOARD™ 40Gbps Optical Transceiver



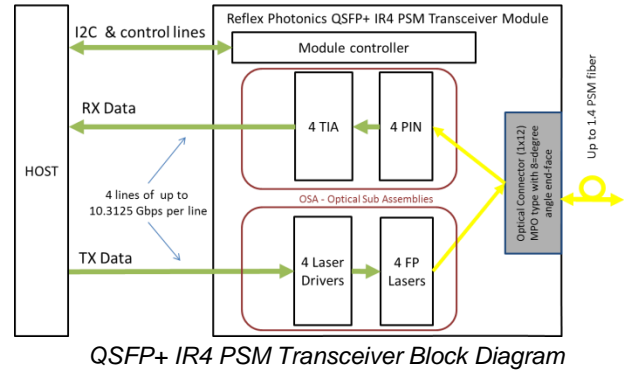
PI-X04-C01801-02 QSFP+ IR4 PSM

Product Summary

The Quad Small Form-Factor Pluggable (QSFP+) IR4 Parallel Single-Mode (PSM) Optical transceiver is a highly integrated 4-channel optical module that provides increased port density and total system cost savings. The QSFP+ full-duplex optical modules offer 4 transmit and 4 receive channels, each capable of 10.3125 Gbps operation for an aggregate bandwidth of 41.25 Gbps over 1.4 km of parallel single-mode optical fiber where transceiver channels use 1310nm center wavelength.

The QSFP+ IR4 PSM transceiver modules offer very high functionality and feature integration, accessible via a two-wire serial interface.

PSM IR4 contains a MPO connector for the optical interface and a 38-pin connector for the electrical interface. To minimize the optical dispersion in the long-haul system, parallel single-mode fiber (PSM) has to be applied in this module.



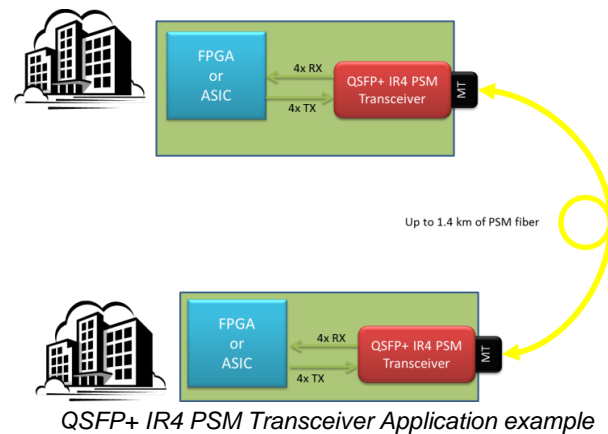
QSFP+ IR4 PSM Transceiver Block Diagram

Specifications and Features Highlights

- Up to 10.3125 Gbps per channel bandwidth
- 4 Parallel lanes design
- Single +3.3V power supply
- CML compatible electrical I/O
- Up to 1.4 km transmission distance on Single-Mode Optical Fiber (SMF)
- MPO with 8-degree angled end-face
- Operating case temperature: 0 to 70°C
- Digital diagnostic capabilities
- Maximum power consumption 3.5 W
- QSFP+ MSA compliant
- RoHS-6 compliant

Applications

- Data Centers
- Ethernet 40G
- Infiniband QDR, DDR, SDR
- 40G Campus link

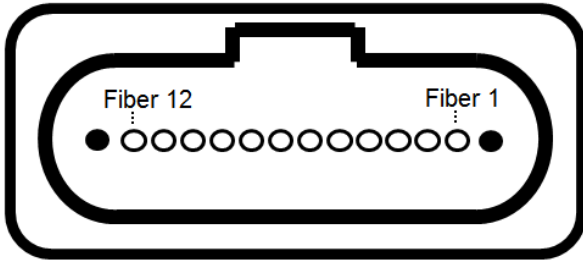


QSFP+ IR4 PSM Transceiver Application example

Optical Interface Lanes

The figure and table below show the orientation of the multi-mode fiber facets of the optical connector and the lane assignment respectively.

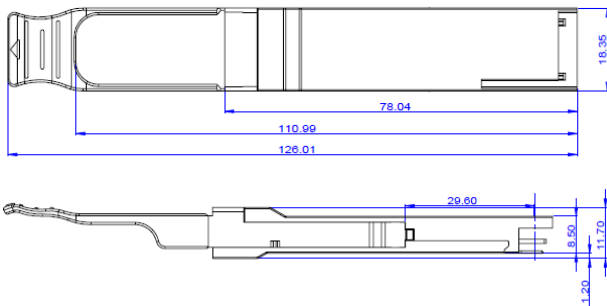
Important: To minimize MPO connection induced reflections, an MPO receptacle with 8-degree angled end-face is utilized for this product. A female MPO connector with 8-degree end-face should be used.



Outside view of the QSFP+ IR4 PSM module MPO receptacle

MPO Fiber #	Lane Assignment	MPO Fiber #	Lane Assignment
1	RX0	7	Unused
2	RX1	8	Unused
3	RX2	9	TX3
4	RX3	10	TX2
5	Unused	11	TX1
6	Unused	12	TX0

Mechanical Considerations



Compliance

Description	Specification
Safety	Laser Class 1 product EN 60825-1: 2007
EMC	EN 55022: 2010 EN:55024:2010
RoHS	2002/95/EC
General information only; details are in data spec	

Ordering Information

Part Number	Description
PI-X04-C01801-02	40G Ethernet, QSFP+ IR4 PSM, 1.4km Fiber Optic Transceiver Module (10.3 Gbps per channel/RX and TX).

For more information on this or other products:
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Note: Document revision history is present in separate document.